

Annual performance evaluation data is reported on the AQS accuracy transaction for gaseous criteria pollutants. This data is reported using 3 or more audit levels on the accuracy transaction. The requirement for reporting this data has been that data for 3 consecutive audit levels were required.

The audit levels apply to the following parameters:

44201 - O₃
42401 - SO₂
42602 - NO₂
42101 - CO

As of January 1, 2011, the audit levels have been redefined by the monitoring program, creating 10 distinct levels in place of the previous 5 (see chart below). AQS, however, still defines only 5 audit level ranges in its tables and software. The purpose of this memo is to provide you with a "work-around" until AQS can be enhanced to support the 10 levels.

Our "work-around" consists of redefining the 5 existing levels in AQS to correspond with the monitoring program's 10 levels as follows:

- AQS Levels one through four values correspond to the monitoring program's new audit level one through four values.
- The fifth audit level in AQS spans the range of audit levels five through ten.
- The audit levels and associated concentration ranges are listed below.

FYI - standard units for parameters 42401 (SO₂) and 42602 (NO₂) are now parts per billion (ppb), instead of ppm. You can enter AQS data using either units code 007 for ppm, or 008 for ppb, however please note that the audit level values presented below have units of parts per million for all 4 parameters.

Another FYI - As part of the revision to audit level reporting, reporting for 3 ranges is still required, however they no longer have to be consecutive levels.

Reporting data using our "work-around"

Because the new level 5 range in AQS spans the levels 5 through 10 defined by our monitoring program, it is possible that an agency can conduct an audit with multiple levels and have multiple values to report under a single AQS level 5 audit range. If this is the case, then the following technique of reporting that data should be used:

Use "incorrect" audit levels on one RA transaction to report the multiple level 5 values... in other words enter the audit pairs as levels 1, 2, and 3, even though the audit pair values are really within the ranges of levels 5, 6, and 7 for example. AQS will not reject data submitted outside the defined level range; instead of rejecting, a warning is provided, which can be ignored. For this example, the audit pair values will be stored in the AQS database with the incorrect level number, however all 3 audit pairs will be linked together as one audit because of the accuracy audit id number being the same for all 3 pairs (from the same monitor on the same date).

With this reporting scenario, the AQS Data Quality Indicator Report (AMP255) will aggregate the data to the correct level when it runs, so even though the level numbers are stored incorrectly in the database, the AMP255 will correctly report them out as level 5. Certification reviewers will need to be aware of this.

We will be enhancing AQS to allow reporting of data for 10 audit levels. Until that enhancement is made, the advantage of reporting your audit data in this proposed way is that the data will be easy for us to convert back to 10 levels once AQS has been enhanced.

	Concentration Range, ppm			
Audit Level	O ₃	SO ₂	NO ₂	CO
1	0.004-0.0059	0.0003-0.0029	0.0003-0.0029	0.020-0.059
2	0.006-0.019	0.0030-0.0049	0.0030-0.0049	0.060-0.199
3	0.020-0.039	0.0050-0.0079	0.0050-0.0079	0.200-0.899
4	0.040-0.069	0.0080-0.0199	0.0080-0.0199	0.900-2.999
5	0.070-0.089	0.0200-0.0499	0.0200-0.0499	3.000-7.999
6	0.090-0.119	0.0500-0.0999	0.0500-0.0999	8.000-15.999
7	0.120-0.139	0.1000-0.1499	0.1000-0.2999	16.000-30.999
8	0.140-0.169	0.1500-0.2599	0.3000-0.4999	31.000-39.999
9	0.170-0.189	0.2600-0.7999	0.5000-0.7999	40.000-49.999
10	0.190-0.259	0.8000-1.000	0.8000-1.000	50.000-60.000